

# **Cisco ISE Ports Reference**

- Cisco ISE All Persona Nodes Ports, on page 1
- Cisco ISE Infrastructure, on page 2
- Operating System Ports, on page 3
- Cisco ISE Administration Node Ports, on page 6
- Cisco ISE Monitoring Node Ports, on page 8
- Cisco ISE Policy Service Node Ports, on page 11
- Cisco ISE pxGrid Service Ports, on page 14
- OCSP and CRL Service Ports, on page 15
- Cisco ISE Processes, on page 15
- Required Internet URLs, on page 15

## **Cisco ISE All Persona Nodes Ports**

#### Table 1: Ports Used by All Nodes

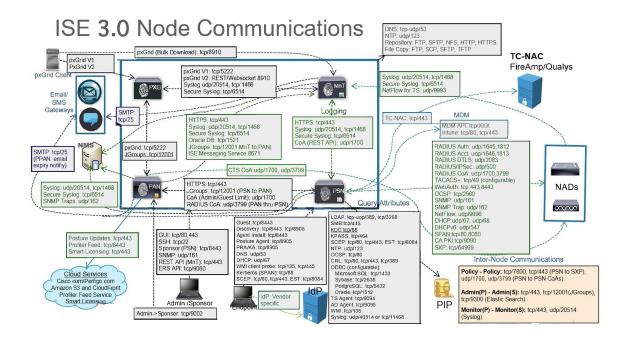
Cisco ISE Service	Ports on Gigabit Ethernet 0 or Bond 0	Ports on Other Ethernet Interfaces (Gigbit Ethernet 1 through 5, or Bond 1 and 2)
Replication and Synchronization	<ul> <li>HTTPS (SOAP): TCP/443</li> <li>Data Synchronization/ Replication (JGroups): TCP/12001 (Global)</li> <li>ISE Messaging Service: SSL: TCP/8671</li> <li>ISE internal communication: TCP/15672</li> <li>Profiler Endpoint Ownership Synchronization/ Replication: TCP/6379</li> </ul>	

### **Cisco ISE Infrastructure**

This appendix lists the TCP and User Datagram Protocol UDP ports that Cisco ISE uses for intranetwork communications with external applications and devices. The Cisco ISE ports listed in this appendix must be open on the corresponding firewall.

Keep in mind the following information when configuring services on a Cisco ISE network:

- The ports are enabled based on the services that are enabled in your deployment. Apart from the ports that are opened by the services running in ISE, Cisco ISE denies access to all other ports.
- Cisco ISE management is restricted to Gigabit Ethernet 0.
- RADIUS listens on all network interface cards (NICs).
- Cisco ISE server interfaces do not support VLAN tagging. If you are installing on a hardware appliance, ensure that you disable VLAN trunking on switch ports that are used to connect to Cisco ISE nodes and configure them as access layer ports.
- The ephemeral port range is from 10000 to 65500. This remains the same for Cisco ISE, Release 2.1 and later.
- VMware on Cloud is supported in Site-to-Site VPN network configuration. Hence, the IP address or port reachability from the network access devices and clients to Cisco ISE must be established without NAT or port filtering.
- All NICs can be configured with IP addresses.
- The policy information point represents the point at which external information is communicated to the Policy Service persona. For example, external information could be a Lightweight Directory Access Protocol (LDAP) attribute.



I

#### **Related Concepts**

Node Types and Personas in Distributed Deployments

**Note** TCP keep alive time on ISE is 60 minutes. Adjust the TCP timeout values accordingly on the firewall if one exists between ISE nodes.

## **Operating System Ports**

The following table lists the TCP ports that NMAP uses for OS scanning. In addition, NMAP uses ICMP and UDP port 51824.

1	3	4	6	7	9	13	17	19
20	21	22	23	24	25	26	30	32
33	37	42	43	49	53	70	79	80
81	82	83	84	85	88	89	90	99
100	106	109	110	111	113	119	125	135
139	143	144	146	161	163	179	199	211
212	222	254	255	256	259	264	280	301
306	311	340	366	389	406	407	416	417
425	427	443	444	445	458	464	465	481
497	500	512	513	514	515	524	541	543
544	545	548	554	555	563	587	593	616
617	625	631	636	646	648	666	667	668
683	687	691	700	705	711	714	720	722
726	749	765	777	783	787	800	801	808
843	873	880	888	898	900	901	902	903
911	912	981	987	990	992	993	995	999
1000	1001	1002	1007	1009	1010	1011	1021	1022
1023	1024	1025	1026	1027	1028	1029	1030	1031
1032	1033	1034	1035	1036	1037	1038	1039	1040-1100
1102	1104	1105	1106	1107	1108	1110	1111	1112

11131141171191121121231241241261130131132137138144145147148114415115215416316416516016911741751831851861871921981991201121312161217121812331241241241247124812591211127212771287129613001301130131113221321341501611132313331344144314551461149415001611163154115341566168716801717171817191720172117231755176117821783180118151816184918401862186318641875100191419517211723175717417817101716171611117471971197219741841841841841841849184018611864187510011914195184918401861186418710101111121741197219741841841841841841849184018611864187191412141214<									
114911511152115411631164116511661169117411751183118511861187119211981199120112131216121712181233123412361244124712481259127112721277128712961300130113091310131113221328133413521417143314341443145514611494150015011503152115241533155615801583159416001641172117231755176117821783180118051812183918401862186318641875190019141935197419711972197419841998-2012013202020212022203020332034203520382040-2032045-20492065206820992100210321052170211021212126213521442160216121702170219121962144216021612170213223602817-238321352144216026652607260826382701270221402200252255725572557255721502501260426052607<	1113	1114	1117	1119	1121	1122	1123	1124	1126
117411751183118511861187119211981199120112131216121712181233123412361244124712481259127112721277128712961300130113091310131113221328133413521417143314541443145514611494150015011503152115241533155615801583159416001641168816661687168817001717171817191720172117231755176117821783180118051812183918401862186318641875190019141935194719711972197419841998-2002013202020212022203020332034203520382040-20432045-204920652040205021112119212121262160205022222512500250025225572061206226042605260726082638270127022050291427172718272526002809301130323033051306301301301302301302301201027172718275 <td< td=""><td>1130</td><td>1131</td><td>1132</td><td>1137</td><td>1138</td><td>1141</td><td>1145</td><td>1147</td><td>1148</td></td<>	1130	1131	1132	1137	1138	1141	1145	1147	1148
120112131216121712181233123412361244124712481259127112721277128712961300130113091310131113221328133413521417143314341443145514611494150015011503152115241533155615801583159416001641172117231755176117821770171817191720172117231755176117821783180118051812183918401862186318641875190019141935194719711972197419841998-20102013202020212022203020332034203520382040-2032045-20492065206820992100210321052111211921212126213521442160216121702170219021912196210022222251225025672557255726012602260426052607260826382701270227102717271827252800280930113031305130513064300730113013301730303031305230503064	1149	1151	1152	1154	1163	1164	1165	1166	1169
124712481259127112721277128712961300130113091310131113221328133413521417143314341443145514611494150015011503152115241533155615801583159416001641165816661687168817001717171817191720172117231755176117821783180118051812183918401862186318641875190019141935194719711972197419841982010201320202021202020302033203420521072111211921212126213521442160216121702179219021912196213521442160216124922500252225572557260126022604260526072608263827012702271027172718272528002810281030313052300130063007301130133017302031243253014377316831113211322032343243253033335133613369337133723380330133643511 <td< td=""><td>1174</td><td>1175</td><td>1183</td><td>1185</td><td>1186</td><td>1187</td><td>1192</td><td>1198</td><td>1199</td></td<>	1174	1175	1183	1185	1186	1187	1192	1198	1199
130113091310131113221328133413521417143314341443145514611494150015011503152115241533155615801583159416001641158816661687168817001717171817191720172117231755176117821783180118051812183918401862186318641875190019141935194719711972197419841998-200201320202021202220302033203420352038204-2042045-2042065206820992100216121702179219021912196210022222251226022882301232323662381-23832393239423992401249225002522255725572601260226042605260726082638270127022710271727182725280028122809301330330530663007301130133017320432432530713778368321132603214322632643033335133673369337037137238939030403476 <td>1201</td> <td>1213</td> <td>1216</td> <td>1217</td> <td>1218</td> <td>1233</td> <td>1234</td> <td>1236</td> <td>1244</td>	1201	1213	1216	1217	1218	1233	1234	1236	1244
143314341443145514611494150015011503152115241533155615801583159416001641165816661687168817001717171817191720172117231755176117821783180118051812183918401862186318641875190019141935194719711972197419841995-2002013202020212022203020332034203520382040-20432045-2049206520682099210021032105-2107211121192121212621352144216021612170217921902191219622002222251226022882301232323662381-23832393239423992401249225002525255726012602260426052607260826382701270227102717271827252800281030103013303305030073011301330173204322432643071377831683211322132603214325333335133673369377376637843800381138034443476	1247	1248	1259	1271	1272	1277	1287	1296	1300
152115241533155615801583159416001641165816661687168817001717171817191720172117231755176117821783180118051812183918401862186318641875190019141935194719711972197419841998-20102013202020212022203020332034203520382040-20432045-2049206520682099210021032105-21072111211921212126213521442160216121702179219021912196200022222251226022882301232323662381-23832393239423992401249225002522255725572601260226042605260726082638270127022710271727182725280028092811286928752005300630073011301330173030303130523005306300730113013317132643268305030643301330633223324325336433333351336735693370337133723389339034043476	1301	1309	1310	1311	1322	1328	1334	1352	1417
165816661687168817001717171817191720172117231755176117821783180118051812183918401862186318641875190019141935194719711972197419841998-2002013202020212022203020332034203520382040-2032045-2049206520682099210021032105-21072111211921212126213521442160216121702179219021912196200022222251226022882301232323662381-2383239323942399240124922500252225572557260126022604260526072608263827012702271027172718272528002809281128692875209929102920296729682983000303130523071307731283168321132213260326132683333335133673369337033713372338933903404347634933517352735463551358036938893690370337373766378438003801380 </td <td>1433</td> <td>1434</td> <td>1443</td> <td>1455</td> <td>1461</td> <td>1494</td> <td>1500</td> <td>1501</td> <td>1503</td>	1433	1434	1443	1455	1461	1494	1500	1501	1503
172117231755176117821783180118051812183918401862186318641875190019141935194719711972197419841998-20102013202020212022203020332034203520382040-20432045-2049206520682099210021032105-21072111211921212126213521442160216121702179219021912196220022222251226022882301232323662381-23832393239423992401249225002522255725572601260226042605260726082638270127022710271727182725280028092811286928752909291029202967296829983000300130033005300630073011301330173030303132530713170312831683211322132603281326833333351336733693370337133723389339034043476349335173527354635513580365938893690370337373766378438003801380 <td>1521</td> <td>1524</td> <td>1533</td> <td>1556</td> <td>1580</td> <td>1583</td> <td>1594</td> <td>1600</td> <td>1641</td>	1521	1524	1533	1556	1580	1583	1594	1600	1641
183018401862186318641875190019141935194719711972197419841998-20102013202020212022203020332034203520382040-20432045-2049206520682099210021032105-21072111211921212126213521442160216121702179219021912196220022222251226022882301232323662381-2383239323942399240124922500252225572557260126022604260526072608263827012702271027172718272528002809281128692875290929102920296729682998300030013003300530063007301130133017303030313052307130773128316832113221326032613268333333513367336933703371337233893390340434763493351735273546355135803659381438263827382838513869387138783880	1658	1666	1687	1688	1700	1717	1718	1719	1720
194719711972197419841998-20102013202020212022203020332034203520382040-20432045-2049206520682099210021032105-21072111211921212126213521442160216121702179219021912196220022222251226022882301232323662381-2383239323942399240124922500252225572557260126022604260526072608263827012702271027172718272528002809281128692875290929102920296729682998300030013003300530063007301130133017303030313052307137773128316832113221326032613268333333513367336933703371337233893390340434763493351735273546355135803659368936903703373737663784380038013809381438263827382838513869387138783880	1721	1723	1755	1761	1782	1783	1801	1805	1812
2022203020332034203520382040-20432045-2049206520682099210021032105-21072111211921212126213521442160216121702179219021912196220022222251226022882301232323662381-23832393239423992401249225002522255725572601260226042605260726082638270127022710271727182725280028092811286928752909291029202967296829983000300130033005300630073011301330173030303130523071377731283168321132213260326132683269328333003301330633223323332433253333335133673569337033713723893390340434763493351735273546355135803659381438263827382838513869387138783880	1839	1840	1862	1863	1864	1875	1900	1914	1935
20682099210021032105-21072111211921212126213521442160216121702179219021912196220022222251226022882301232323662381-2383239323942399240124922500252225252557260126022604260526072608263827012702271027172718272528002809281128692875290929102920296729682998300030013003300530063007301130133017303030313052307137703128316832113221326032613268326932833300330133063322332333243325333335133673369337037137233893590340434763493351735273546355135803659381438263827382838513869387138783880	1947	1971	1972	1974	1984	1998-2010	2013	2020	2021
213521442160216121702179219021912196220022222251226022882301232323662381-2383239323942399240124922500252225252557260126022604260526072608263827012702271027172718272528002809281128692875290929102920296729682998300030013003300530063007301130133017303030313052307130773128316832113221326032613268333333513367336933703371337233893390340434763493351735273546355135803659381438263827382838513869387138783880	2022	2030	2033	2034	2035	2038	2040-2043	2045-2049	2065
220022222251226022882301232323662381-2383239323942399240124922500252225252557260126022604260526072608263827012702271027172718272528002809281128692875290929102920296729682998300030013003300530063007301130133017303030313052370130773128316832113221326032613268333333513367336933703371337233893390340434763493351735273546355135803659381438263827382838513869387138783880	2068	2099	2100	2103	2105-2107	2111	2119	2121	2126
239323942399240124922500252225252557260126022604260526072608263827012702271027172718272528002809281128692875290929102920296729682998300030013003300530063007301130133017303030313052307130773128316832113221326032613268326932833300330133063322332333243325333333513367336933703371337233893390340434763493351735273546355135803659368936903703373737663784380038013809381438263827382838513869387138783880	2135	2144	2160	2161	2170	2179	2190	2191	2196
260126022604260526072608263827012702271027172718272528002809281128692875290929102920296729682998300030013003300530063007301130133017303030313052307130773128316832113221326032613268326932833300330133063322332333243325333333513367336933703371337233893390340434763493351735273546355135803659368936903703373737663784380038013809381438263827382838513869387138783880	2200	2222	2251	2260	2288	2301	2323	2366	2381-2383
271027172718272528002809281128692875290929102920296729682998300030013003300530063007301130133017303030313052307130773128316832113221326032613268326932833300330133063322332333243325333333513367336933703371337233893390340434763493351735273546355135803659381438263827382838513869387138783880	2393	2394	2399	2401	2492	2500	2522	2525	2557
290929102920296729682998300030013003300530063007301130133017303030313052307130773128316832113221326032613268326932833300330133063322332333243325333333513367336933703371337233893390340434763493351735273546355135803659381438263827382838513869387138783880	2601	2602	2604	2605	2607	2608	2638	2701	2702
300530063007301130133017303030313052307130773128316832113221326032613268326932833300330133063322332333243325333333513367336933703371337233893390340434763493351735273546355135803659368936903703373737663784380038013809381438263827382838513869387138783880	2710	2717	2718	2725	2800	2809	2811	2869	2875
307130773128316832113221326032613268326932833300330133063322332333243325333333513367336933703371337233893390340434763493351735273546355135803659368936903703373737663784380038013809381438263827382838513869387138783880	2909	2910	2920	2967	2968	2998	3000	3001	3003
3269       3283       3300       3301       3306       3322       3323       3324       3325         3333       3351       3367       3369       3370       3371       3372       3389       3390         3404       3476       3493       3517       3527       3546       3551       3580       3659         3689       3690       3703       3737       3766       3784       3800       3801       3809         3814       3826       3827       3828       3851       3869       3871       3878       3880	3005	3006	3007	3011	3013	3017	3030	3031	3052
3333       3351       3367       3369       3370       3371       3372       3389       3390         3404       3476       3493       3517       3527       3546       3551       3580       3659         3689       3690       3703       3737       3766       3784       3800       3801       3809         3814       3826       3827       3828       3851       3869       3871       3878       3880	3071	3077	3128	3168	3211	3221	3260	3261	3268
3404       3476       3493       3517       3527       3546       3551       3580       3659         3689       3690       3703       3737       3766       3784       3800       3801       3809         3814       3826       3827       3828       3851       3869       3871       3878       3880	3269	3283	3300	3301	3306	3322	3323	3324	3325
3689         3690         3703         3737         3766         3784         3800         3801         3809           3814         3826         3827         3828         3851         3869         3871         3878         3880	3333	3351	3367	3369	3370	3371	3372	3389	3390
3814         3826         3827         3828         3851         3869         3871         3878         3880	3404	3476	3493	3517	3527	3546	3551	3580	3659
	3689	3690	3703	3737	3766	3784	3800	3801	3809
3889         3905         3914         3918         3920         3945         3971         3986         3995	3814	3826	3827	3828	3851	3869	3871	3878	3880
	3889	3905	3914	3918	3920	3945	3971	3986	3995

3998400-40040454111412541264129422442424279432143434443444544464449450467746624848489949004998500-500500950305033505050515054506050615080507510051015102512052052052152225225526952805298535754055414543154325400501051151455505560566056153335666578579057185730580058125877590050759115155925955596059525959590050759115915592592559505952595959005075911591559259255950595259595900507591159155925925595059525959590050759115915592592559505952595959005075911591559259255950595259595900507591159155925925595059525959590050759115155925925950516051615914512592592592559505165165915596598596516									
AbsertAbser	3998	4000-4006	4045	4111	4125	4126	4129	4224	4242
S033S050S051S054S060S061S080S087S100S101S102S120S190S200S214S221S223S23S264S260S280S280S357S405S414S431S432S404S500S510S540S550S560S660S611S611S410S500S510S510S550S560S660S611S611S633S666S678S679S718S730S800S801S802S810S811S150S22S25S550S560S620S959S90590S910S911S915S922S95S950S950S952S90596S9798S98600G009G025G59G100G101G106G112G123G129G156G460G669G609G610G43G641G578S790S788G790G103G104G104G104G124G134G129G104G104G104G104G104G104G692G69G700G104G102G104G104G104G104G104G114G124G124G24G24G24G24G104G104G104G124G124G124G124G124G124G124G124G104G104G124G124G124G124G124G124G124G124G	4279	4321	4343	4443	4444	4445	4446	4449	4550
S101S102S120S120S200S214S211S222S225S264S280S387S405S414S431S432S400S500S510S544S550S560S560S661S633S666S678S679S718S730S800S801S802S810S811S815S822S25S850S850S852S875S90-S907S910S911S915S922S925S950S952S959S90-S907S974S980600960256050610061016106G112G123G129G156G346G89650265136543G544S685G58066466667666866696689G690G7007010702070147017718074307496G7147037718070197025701771874037496G71471377174717878007011711G720721737738801480148045S005S019S010S011S011S012S011S012S013S014S021S224S254S260S64S64S64S64S010S013S014S014S014S014S014S014S014S024S024S024S024S014S024S014S014S014 <tr< td=""><td>4567</td><td>4662</td><td>4848</td><td>4899</td><td>4900</td><td>4998</td><td>5000-5004</td><td>5009</td><td>5030</td></tr<>	4567	4662	4848	4899	4900	4998	5000-5004	5009	5030
S226S269S280S298S357S406S414S431S432S404S500S510S504S550S560S661S611S433S666S678S679S718S730S800S801S802S810S811S815S822S825S850S859S862S877S900-590S910S911S915S222S925S950S92S959S90-590S987-598S998-60760960266050510061016106S111G123G129G156G464G849650265106543664066706686669669669669669679067006700704070707180702070107100710371067200721074307443749671017211737773787800701171172007211737073808011802180118021800408009801081018120813181328131800080108101810281028133833833800080198100810181218132813281418000801981018121812281318132814180108019810181218122813181328141800080198101 <td< td=""><td>5033</td><td>5050</td><td>5051</td><td>5054</td><td>5060</td><td>5061</td><td>5080</td><td>5087</td><td>5100</td></td<>	5033	5050	5051	5054	5060	5061	5080	5087	5100
54405005510554455505555556056605631533356605780579057185730580158015802581058115815582258255850585058625877590590591059115915592259505950595259595905905987.5995998.600760096025605061006101610461126123612961566364666766686692669267906790678267926383681160116920609070017002701470707019702570707010710371037104720074337443749671171047131737073808011802801781180808091801280118028011802801480208121821482118121813281338338000801380280108013833833801480208014802080148020801481418014812081318121813181428141801480208014819181228133833801581238243829080408010813383380158143814081618161	5101	5102	5120	5190	5200	5214	5221	5222	5225
Sead 5033Sead 5066Sead 5078Sead 5078Sead 5078Sead 5078Sead 5078Sead 5080Sead <b< td=""><td>5226</td><td>5269</td><td>5280</td><td>5298</td><td>5357</td><td>5405</td><td>5414</td><td>5431</td><td>5432</td></b<>	5226	5269	5280	5298	5357	5405	5414	5431	5432
S810S811S815S822S825S850S859S862S8775905-900S910S911S915S922S925S950S952S9595965-930S987-989S998-60076009602561006101610661126123612961566346668066706681666965476565676580664666676681669066916692669967796788679061026810691169697000701070207040701771387070710071037106720174127435744374967512762776707741777777807800791179207921793779387990800180128013819480088093809981008181819281938194810080282218290829182928300833383384008402843850086048611861286148101810281949000901090290190290319049049040901191191191190319049059139141911911911903190490591391419119119119031904920920 <td< td=""><td>5440</td><td>5500</td><td>5510</td><td>5544</td><td>5550</td><td>5555</td><td>5560</td><td>5566</td><td>5631</td></td<>	5440	5500	5510	5544	5550	5555	5560	5566	5631
Synch 5900590Synch 5911Synch 5911Synch 5912Synch 5925Synch 5950Synch 5952Synch 5953Synch 5953Synch 5953Syn	5633	5666	5678	5679	5718	5730	5800	5801	5802
Signed for 5905-5905Signed for 6009Good 6025Good 6059Giod 6100Giod 6101Giod 6106611261236129615663406389650265106543654765656580664066666667668866696699669266996779678867926792683968816901696970007010702070407017701970257070710071037166720072017432744374967512762776767741777777787800791179207921793779387999800080018022804580088099801080118021802280318142814380088093809981008181819281338338100822282548290829182928300833383381018009810190109011902901902903909190109101910291039119119039091922092009119119119119039039575953954951591391491190392199209911911911911911903923955953954955913 </td <td>5810</td> <td>5811</td> <td>5815</td> <td>5822</td> <td>5825</td> <td>5850</td> <td>5859</td> <td>5862</td> <td>5877</td>	5810	5811	5815	5822	5825	5850	5859	5862	5877
And 6120And 6120And 6120And 6120And 6120And 6120And 6120And 6120And 612061126123612961566156638065026510654365476565-657658066406667666866696689669066926699677967886789679268396881690169697000700170207040700770197025707071007103710672007201740274357443749675127625762776767741777777887800791179207921793779387999800080018022804580088090801080118021802280318042804580808093809081008180818181928193819482008222825482908291829283008333833840084028433850086498651865286548701880088738888889989490009019029030909190909101910191029139110911192009207922095395495059618966697698738988990911914914948 <td< td=""><td>5900-5907</td><td>5910</td><td>5911</td><td>5915</td><td>5922</td><td>5925</td><td>5950</td><td>5952</td><td>5959</td></td<>	5900-5907	5910	5911	5915	5922	5925	5950	5952	5959
And 6547And 654567And 6580And 6640And 66667And 6667And 6668And 66696692669967796788678967926839688169016696700070017002700470077019702570707100710371067200720174027435744374967512762576277676774177777778780079117920792179377938799980008010800280078008809980108011802180228031804280458008809380998100818081818192819381948100822282548290829182928300833383384008003887388888899894090019010901903090199010911191029103911091119000920792209290941594395009503953195759593959495959618966698769877987898989900911792999439944968	5960-5963	5987-5989	5998-6007	6009	6025	6059	6100	6101	6106
1 - 0 - 0 $1 - 0$ </td <td>6112</td> <td>6123</td> <td>6129</td> <td>6156</td> <td>6346</td> <td>6389</td> <td>6502</td> <td>6510</td> <td>6543</td>	6112	6123	6129	6156	6346	6389	6502	6510	6543
1 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 -	6547	6565-6567	6580	6646	6666	6667	6668	6669	6689
111	6692	6699	6779	6788	6789	6792	6839	6881	6901
111	6969	7000	7001	7002	7004	7007	7019	7025	7070
111	7100	7103	7106	7200	7201	7402	7435	7443	7496
111	7512	7625	7627	7676	7741	7777	7778	7800	7911
ActionActionActionActionActionActionActionActionAction8080-809080938099810081808181819281938194820082228254829082918292830083338383840084028443850086008649865186528654870188008873888888998994900090019002900390999010901190409050907190809081909090919099910091019102910391109111920092079220929094159418948595009502950395359575959395949595961896669876987798789898990091792929433944968	7920	7921	7937	7938	7999	8000	8001	8002	8007
111	8008	8009	8010	8011	8021	8022	8031	8042	8045
ActionActionActionActionActionActionActionActionActionAction84008402844385008600864986518652865487018800887388888899899490009001900290039009901090119040905090719080908190909091909991009101910291039110911192009207922092909415941894859500950295039535957595939594959596189666987698779878989899009917929943399449968	8080-8090	8093	8099	8100	8180	8181	8192	8193	8194
A C C C C C C C C C C C C C C C C C C C	8200	8222	8254	8290	8291	8292	8300	8333	8383
A C C C C C C C C C C C C C C C C C C C	8400	8402	8443	8500	8600	8649	8651	8652	8654
A C C C C C C C C C C C C C C C C C C C	8701	8800	8873	8888	8899	8994	9000	9001	9002
Action         Action<	9003	9009	9010	9011	9040	9050	9071	9080	9081
9503       9535       9575       9593       9594       9595       9618       9666       9876         9877       9878       9898       9900       9917       9929       9943       9944       9968	9090	9091	9099	9100	9101	9102	9103	9110	9111
9877     9878     9898     9900     9917     9929     9943     9944     9968	9200	9207	9220	9290	9415	9418	9485	9500	9502
	9503	9535	9575	9593	9594	9595	9618	9666	9876
9998 9999 10000 10001 10002 10003 10004 10009 10010	9877	9878	9898	9900	9917	9929	9943	9944	9968
	9998	9999	10000	10001	10002	10003	10004	10009	10010

I

10012	10024	10025	10082	10180	10215	10243	10566	10616
10617	10621	10626	10628	10629	10778	11110	11111	11967
12000	12174	12265	12345	13456	13722	13782	13783	14000
14238	14441	14442	15000	15002	15003	15004	15660	15742
16000	16001	16012	16016	16018	16080	16113	16992	16993
17877	17988	18040	18101	18988	19101	19283	19315	19350
19780	19801	19842	20000	20005	20031	20221	20222	20828
21571	22939	23502	24444	24800	25734	25735	26214	27000
27352	27353	27355	27356	27715	28201	30000	30718	30951
31038	31337	32768	32769	32770	32771	32772	32773	32774
32775	32776	32777	32778	32779	32780	32781	32782	32783
32784	32785	33354	33899	34571	34572	34573	34601	35500
36869	38292	40193	40911	41511	42510	44176	44442	44443
44501	45100	48080	49152	49153	49154	49155	49156	49157
49158	49159	49160	49161	49163	49165	49167	49175	49176
49400	49999	50000	50001	50002	50003	50006	50300	50389
50500	50636	50800	51103	51493	52673	52822	52848	52869
54045	54328	55055	55056	55555	55600	56737	56738	57294
57797	58080	60020	60443	61532	61900	62078	63331	64623
64680	65000	65129	65389					

# **Cisco ISE Administration Node Ports**

The following table lists the ports used by the Administration nodes:

Cisco ISE Service	Ports on Gigabit Eth	ernet 0 or Bond 0	Ports on Other Ethernet Interfaces (Gigbit Ethernet 1 through 5, or Bond 1 and 2)
Administration		, HTTPS: TCP/443 cted to TCP/443; not	
	• SSH Server: To	CP/22	
	• CoA		
	• External REST REST API: TC	ful Services (ERS) P/9060	
	• • To manage gue Admin GUI: To	est accounts from CP/9002	
	replicate data f	Context Visibility; to rom primary to nin node): TCP/9300	
	Admin	) and 443 support web applications and bled by default.	
	Cisco IS	and SSH access to SE is restricted to Ethernet 0.	
	both Pri Admini	00 must be open on imary and Secondary stration Nodes for ng traffic.	
Monitoring	• SNMP Query:	UDP/161	<u> </u>
	Note This po	rt is route table depend	lent.
	• ICMP		
Logging (Outbound)	Syslog: UDP/2	0514, TCP/1468	
	Secure Syslog:	TCP/6514	
	Note Default	ports are configurable	for external logging.
	• SNMP Traps: U	JDP/162	

#### Table 2: Ports Used by the Administration Nodes

Cisco ISE Service	Ports on Gigabi	it Ethernet 0 or Bond 0	Ports on Other Ethernet Interfaces (Gigbit Ethernet 1 through 5, or Bond 1 and 2)		
External Identity Sources	Admin Us	er Interface and Endpoint A	Authentications:		
and Resources (Outbound)	• LDA	P: TCP/389, 3268, UDP/38	39		
	• SMB	: TCP/445			
	• KDC	: TCP/88			
	• KPAS	SS: TCP/464			
	• WMI : TC	PP/135			
	• ODBC:				
	Note	The ODBC ports are configurable on the third-party database server.			
	Microsoft SQL: TCP/1433				
	• Sybase: TCP/2638				
	PortgreSQL: TCP/5432				
	• Oracle: TCP/1521				
	• NTP: UDP/323 (localhost interfaces only)				
	• DNS: UDP/53, TCP/53				
	Note		ces and services reachable only through gabit Ethernet 0, configure static routes		
			CMP ping towards DNS while on against an Active Directory		
Email	Guest account a	and user password expiration	ons email notification: SMTP: TCP/25		
Smart Licensing	Connection to Cisco cloud over TCP/443				
	Connection to S	SSM On-Prem server over	TCP/443 and ICMP		

## **Cisco ISE Monitoring Node Ports**

The following table lists the ports used by the Monitoring nodes:

ſ

Cisco ISE Service	Ports on Gigabit Ethernet 0 or BondPorts on Other Ethernet Interface0(Gigabit Ethernet 1 through 5, or Bond 1 and Bond 2)		
Administration	• HTTP: TCP/80, HTTPS: — TCP/443 • SSH Server: TCP/22		
Monitoring	Simple Network Management Protocol [SNMP]: UDP/161         Note       This port is route table dependent.         • ICMP		
Logging	<ul> <li>Syslog: UDP/20514, TCP/1468</li> <li>Secure Syslog: TCP/6514</li> <li>Note Default ports are configurable for external logging.</li> <li>SMTP: TCP/25 for email of alarms</li> <li>SNMP Traps: UDP/162</li> </ul>		

#### Table 3: Ports Used by the Monitoring Nodes

Cisco ISE Service	Ports on Gigabit Ethernet 0 or Bond 0	Ports on Other Ethernet Interfaces (Gigabit Ethernet 1 through 5, or Bond 1 and Bond 2)			
External Identity Sources and	Admin User Interface and End	dpoint Authentications:			
Resources (Outbound)	• LDAP: TCP/389, 3268, U	UDP/389			
	• SMB: TCP/445				
	• KDC: TCP/88, UDP/88				
	• KPASS: TCP/464				
	• WMI : TCP/135				
	• ODBC:				
	<b>Note</b> The ODBC ports are configurable on the third-p database server.				
	Microsoft SQL: TCP/1433				
	• Sybase: TCP/2638				
	PortgreSQL: TCP/5432				
	• Oracle: TCP/1521, 15723, 16820				
	• NTP: UDP/323 (localhost interfaces only)				
	• DNS: UDP/53, TCP/53				
		ources and services reachable only ther than Gigabit Ethernet 0, accordingly.			
Ports used for inbound communication	MnT inbound communication Gateway enabled to route the	from an ISE node with the ISE API MnT REST APIs: TCP/9443			
	1521 is required for inbound c	enabled for the MnT nodes. Port communication from PAN. If this T nodes, MnT node failover might s.			
	<b>Note</b> These ports are require irrespective of being C	ed in all types of deployments Dn-Prem or cloud.			
Bulk Download for pxGrid	SSL: TCP/8910				

L

### **Cisco ISE Policy Service Node Ports**

Cisco ISE supports HTTP Strict Transport Security (HSTS) for increased security. Cisco ISE sends HTTPS responses indicating to browsers that ISE can only be accessed using HTTPS. If users then try to access ISE using HTTP instead of HTTPS, the browser changes the connection to HTTPS before generating any network traffic. This functionality prevents browsers from sending requests to Cisco ISE using unencrypted HTTP before the server can redirect them.

The following table lists the ports used by the Policy Service nodes:

Cisco ISE Service	Ports on Gigabit Ethernet 0 or Bond 0	Ports on Other Ethernet Interfaces, or Bond 1 and Bond 2		
Administration	<ul> <li>HTTP: TCP/80, HTTPS: TCP/443</li> <li>SSH Server: TCP/22</li> <li>OCSP: TCP/2560</li> </ul>	Cisco ISE management is restricted to Gigabit Ethernet 0.		
Clustering (Node Group)	Node Groups/JGroups: TCP/7800	_		
SCEP	TCP/9090	_		
IPSec/ISAKMP	UDP/500	—		
Device Administration	TACACS+: TCP/49         Note       This port is configurable :	in Release 2.1 and later releases.		
TrustSec	Use HTTP and Cisco ISE REST API devices over port 9063.	to transfer TrustSec data to network		
SXP	<ul> <li>PSN (SXP node) to NADs: TCP/64999</li> <li>PSN to SXP (internal communication on the same Cisco ISE): TCP/9644</li> </ul>			
TC-NAC	TCP/443			
Monitoring	Simple Network Management Protoco	ol [SNMP]: UDP/161		
	<b>Note</b> This port is route table de	pendent.		
Logging (Outbound)	<ul> <li>Syslog: UDP/20514, TCP/1468</li> <li>Secure Syslog: TCP/6514</li> <li>Note Default ports are configurable for external logging.</li> </ul>			
	Behavit ports are conligu	usie for external logging.		

• SNMP Traps: UDP/162

Table 4: Ports Used by the Policy Service Nodes

Cisco ISE Service	Ports on Gi	gabit Ethernet 0 or Bond 0	Ports on Other Ethernet Interfaces, or Bond 1 and Bond 2		
Session	• RADI	US Authentication: UDP/10	645, 1812		
	• RADI	US Accounting: UDP/1646	5, 1813		
	• RADI	US DTLS Authentication/A	Accounting: UDP/2083.		
	• RADI	US Change of Authorizatio	n (CoA) Send: UDP/1700		
	• RADI 3799	US Change of Authorizatio	n (CoA) Listen/Relay: UDP/1700,		
	Note	UDP port 3799 is not con	figurable.		
External Identity Sources and	• Admin	n User Interface and Endpo	int Authentications:		
Resources (Outbound)	• LDAP: TCP/389, 3268				
	• SMB: TCP/445				
	• KDC: TCP/88				
	• KPASS: TCP/464				
	• WMI : TCP/135				
	• ODBC	2:			
	Note	The ODBC ports are database server.	configurable on the third-party		
	Microsoft SQL: TCP/1433				
	• Sybase: TCP/2638				
	• PortgreSQL: TCP/5432				
	• Oracle: TCP/1521				
	• NTP: UDP/323 (localhost interfaces only)				
		UDP/53, TCP/53	57		
	Note		ces and services reachable only than Gigabit Ethernet 0, configure		
Passive ID (Inbound)	• TS Ag	gent: tcp/9094			
	• AD A	gent: tcp/9095			
	• Syslog	g: UDP/40514, TCP/11468			

Cisco ISE Service	Ports on Gigabit Ethernet 0 or Bond 0Ports on Other Ethernet Interfaces, or Bond 1 and Bond 2				
Web Portal Services:	HTTPS (Interface must be enabled for service in Cisco ISE):				
- Guest/Web Authentication	Blocked List Portal: TCP/8000-8999 (default port is TCP/8444)				
<ul> <li>Guest Sponsor Portal</li> <li>My Devices Portal</li> <li>Client Provisioning</li> <li>Certificate Provisioning</li> <li>Blocked List Portal</li> </ul>	<ul> <li>Guest Portal and Client Provisioning: TCP/8000-8999 (default port is TCP/8443)</li> <li>Certificate Provisioning Portal: TCP/8000-8999 (default port is TCP/8443)</li> <li>My Devices Portal: TCP/8000-8999 (default port is TCP/8443)</li> <li>Sponsor Portal: TCP/8000-8999 (default port is TCP/8445)</li> <li>SMTP guest notifications from guest and sponsor portals: TCP/25</li> </ul>				
Posture	Discovery (Client side): TCP/80 (HTTP), TCP/8905 (HTTPS)				
- Discovery - Provisioning	NoteBy default, TCP/80 is redirected to TCP/8443. See Web Portal Services: Guest Portal and Client Provisioning.				
- Assessment/ Heartbeat	Cisco ISE presents the Admin certificate for Posture and Client Provisioning on TCP port 8905.				
	Cisco ISE presents the Portal certificate on TCP port 8443 (or the port that you have configured for portal use).				
	• Discovery (Policy Service Node side): TCP/8443, 8905 (HTTPS)				
	From Cisco ISE, Release 2.2 or later with AnyConnect, Release 4.4 or later, this port is configurable.				
Bring Your Own Device (BYOD) / Network Service	Provisioning - URL Redirection: See Web Portal Services: Guest Portal and Client Provisioning.				
Protocol (NSP) - Redirection	• For Android devices with EST authentication: TCP/8084. Port 8084 must be added to the Redirect ACL for Android devices.				
- Provisioning - SCEP	<ul> <li>Provisioning - Active-X and Java Applet Install (includes the launch of Wizard Install): See Web Portal Services: Guest Portal and Client Provisioning</li> <li>Provisioning - Wizard Install from Cisco ISE (Windows and Mac OS): TCP/8443</li> </ul>				
	• Provisioning - Wizard Install from Google Play (Android): TCP/443				
	Provisioning - Supplicant Provisioning Process: TCP/8905				
	• SCEP Proxy to CA: TCP/80 or TCP/443 (Based on SCEP RA URL configuration)				

Cisco ISE Service	Ports on Giga	bit Ethernet 0 or Bond 0	Ports on Other Ethernet Interfaces, or Bond 1 and Bond 2
Mobile Device Management (MDM) API Integration	<ul> <li>URL Redirection: See Web Portal Services: Guest Portal and Client Provisioning</li> <li>API: Vendor specific</li> <li>Agent Install and Device Registration: Vendor specific</li> </ul>		
Profiling	• NetFlow: UDP/9996		
	Note	This port is configurable.	
	• DHCP: UDP/67		
	Note	This port is configura	able.
	• DHCP SPAN Probe: UDP/68		
	• HTTP: TCP/80, 8080		
	• DNS: UDP/53 (lookup)		
	Note	This port is route tab	le dependent.
	• SNMP Query: UDP/161		
	Note	This port is route tab	le dependent.
	• SNMP TRAP: UDP/162		
	Note	This port is configura	able.

# **Cisco ISE pxGrid Service Ports**

The following table lists the ports used by the pxGrid Service nodes:

Table 5: Ports Used by the pxGrid Service Node

Cisco ISE Service	Ports on Gigabit Ethernet 0 or Bond 0	Ports on Other Ethernet Interfaces (Gigabit Ethernet 1 through 5, or Bond 1 and Bond 2)
Administration	SSL: TCP/5222 (Inter-Node Communication)	_
	• SSL: TCP/7400 (Node Group Communication)	
pxGrid Subscribers	TCP/8910	
Inter-node communication	TCP/8910	

### **OCSP and CRL Service Ports**

For the Online Certificate Status Protocol services (OCSP) and the Certificate Revocation List (CRL), the ports are dependent on the CA Server or on service hosting OCSP/CRL although references to the Cisco ISE services and ports list basic ports that are used in Cisco ISE Administration Node, Policy Service Node, Monitoring Node separately.

For the OCSP, the default ports that can be used are TCP 80/ TCP 443. Cisco ISE Admin portal expects http-based URL for OCSP services, and so, TCP 80 is the default. You can also use non-default ports.

For the CRL, the default protocols include HTTP, HTTPS, and LDAP and the default ports are 80, 443, and 389 respectively. The actual port is contingent on the CRL server.

### **Cisco ISE Processes**

Process Name	Description	Service Impact
Database Listener	Oracle Enterprise Database Listener	Must be in Running state for all services to work properly
Database Server	Oracle Enterprise Database Server. Stores both configuration and operational data.	Must be in Running state for all services to work properly
Application Server	Main Tomcat Server for ISE	Must be in Running state for all services to work properly
Profiler Database	Redis database for ISE Profiling service	Must be in Running state for ISE profiling service to work properly
AD Connector	Active Directory Runtime	Must be in Running state for ISE to perform Active Directory authentications
MnT Session Database	Oracle TimesTen Database for MnT service	Must be in Running state for all services to work properly
MnT Log Collector	Log collector for MnT service	Must be in Running state for MnT Operational Data
MnT Log Processor	Log processor for MnT service	Must be in Running state for MnT Operational Data
Certificate Authority Service	ISE Internal CA service	Must be in Running state if ISE internal CA is enabled

The following table lists the Cisco ISE processes and their service impact:

### **Required Internet URLs**

The following table lists the features that use certain URLs. Configure either your network firewall or a proxy server so that IP traffic can travel between Cisco ISE and these resources. If access to any URL listed in the following table cannot be provided, the related feature may be impaired or inoperable.

I

#### Table 6: Required URLs Access

Feature	URLs
Posture updates	https://www.cisco.com/
	https://iseservice.cisco.com
Profiling Feed Service	https://ise.cisco.com
Smart Licensing	https://tools.cisco.com, in Cisco ISE Release 3.0 Patch 6 and earlier releases
	https://smartreceiver.cisco.com , in Cisco ISE Release 3.0 Patch 7 and later releases
Telemetry	https://connectdna.cisco.com/
Microsoft Entra ID	login.microsoftonline.com:443
	*.login.microsoftonline.com:443
	*.login.microsoft.com:443
Social Login for Self-Registered Guests	facebook.co
	akamaihd.net
	akamai.co
	fbcdn.net

The Interactive Help feature needs Cisco ISE to connect to the following URLs using the administration portal browser:

- \*.walkme.com
- \*.walkmeusercontent.com